

of being subequal as in the male. Tip of abdomen noticeably clothed with short, erect, ashy-white hairs (black in some lights).

Pupal case cigar shaped, smooth, papery, pale brown, except for smaller end which is black owing to the presence of a hard packed, grayish black deposit within that end of the case. Length, 4-6 mm. Emergence is effected by a complete excision of the large end of the case.

Type locality. New York.

Recorded distribution. New Haven, Connecticut, 1 ♂, June 9, 1905 (Viereck, 1906). Revelstoke, Selkirk Mts., British Columbia, July 8-13 (Banks, 1919). Banks (1919:239) states, "But one species known which occurs across the northern part of North America."

New records. Mt. Diablo, Contra Costa County, California, 4 ♂ ♂, 2 ♀ ♀, reared from pupae collected on January 12, 1947, by MacSwain and Bohart.

Humilis is readily recognized by the bifasciate character of the fore wing, the dull white marking on each hind tibia, and the nature and color of the vestiture.

A SENSILLUM IN *CARPOPHILUS* AND *HAPTONCUS* (Coleoptera, Nitidulidae)

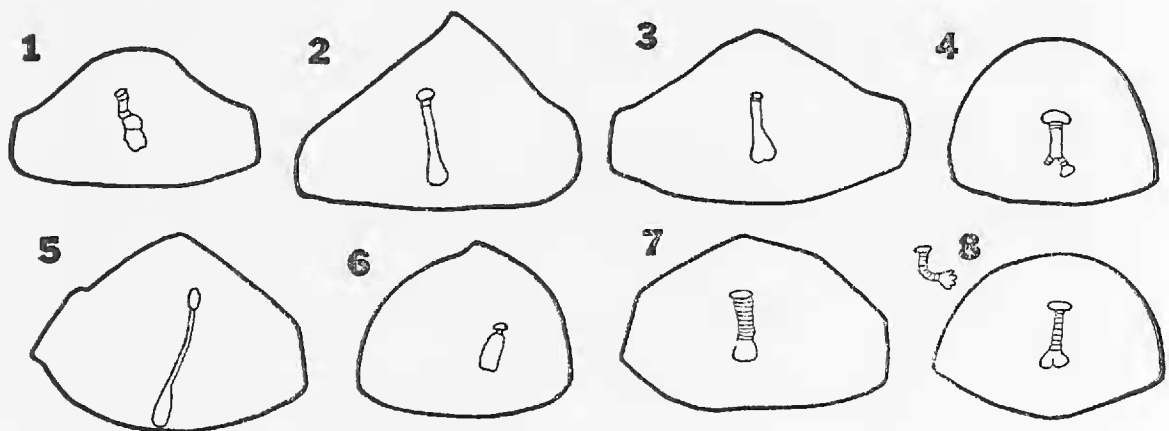
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The chitinous invagination of the terminal segment of the antennae of certain Nitidulidae reported herein should properly and descriptively be referred to as a *sensillum ampulaceum*. The organ has been found in only two genera, *Haptoncus* and *Carpophilus*, although several genera in this family have been examined. It was clearly observed in all species of these genera examined with the single exception of *C. pallipennis* (Say.)

This sensillum was first noticed in slide material prepared during the description of a new species of *Haptoncus*. Although it can be observed with fairly low magnification, it is necessary to mount the segment upon a slide and use transmitted light because the organ is enclosed within the segment.

In the Nitidulidae the antennae are eleven segmented with a three segmented somewhat flattened club. The terminal segment is

generally roughly pentagonal in outline and often under low magnification has the appearance of two articulated segments. Upon the lower surface of the segment at the line of this apparent fusion is the circular or oval opening of the sensillum. The main part or body of the organ rests inside of the segment and is extended toward the base of the antennae. The structure is chitinous and might easily have been formed during the evolution of this antenal segment by the telescoping of a primitive twelfth segment into the eleventh.



Figures show the outline of the terminal segment and its sensillum ampulaceum. 1, *Carpophilus* sp.; 2, *Carpophilus discoideus* Lec.; 3, *Carpophilus humeralis* (Fabr.); 4, *Haptoncus ochraceus* Er.; 5, *Carpophilus brachypterus* (Say); 6, *Carpophilus antiquus* Melsh.; 7, *Haptoncus luteolus* (Er.); 8, *Haptoncus californicus* Gillogly, inset of an aberrant form of the sensillum in *H. californicus*.

In different species the shape and appearance of the sensillum may vary greatly. It sometimes extends for nearly two-thirds of the length of the segment as in *Carpophilus brachypterus* (Say) (fig. 5) or for less than one-fourth of that distance as in *C. antiquus* Melsh. (fig. 6). Although it is usually a simple pear-shaped flask, it may be clubbed, convoluted, or even divided at the base as in *Haptoncus ochraceus* Er. (fig. 4). The neck of the flask is often ringed or reticulate for all or part of its length and these markings sometimes extend over the entire surface of the sensillum. This variation in the organ is often greatest between closely allied species and is very helpful in such cases as a specific character. *Haptoncus luteolus* (Er.) (fig. 7) and *H. ochraceus* Er. (fig. 4) are very similar in appearance but the sensilla quickly and definitely separate them. *Carpophilus humeralis* (Fabr.) (fig. 3) and *Carpophilus* sp. (fig. 1) can scarcely be separated on the basis of existing descrip-

tions but the sensillum of the latter is so remarkably different from the former as well as from all other species examined as to be definitely recognizable without examining the rest of the insect. In *Haptoncus californicus* Gillogly one antenna of one specimen had the sensillum bent to form a right angle. An inset of this sensillum is included although it is not typical of this or any other species examined. While this new character will be very helpful in many cases it must be remembered that in some species the sensilla are very similar in shape and appearance and it would be difficult, if not impossible, to identify all species merely by this character alone.

The genus *Haptoncus* was first placed in the Nitidulariae by Erichson (1843) when he described the species *Haptoncus* (*Epuraea*) *luteolus* (Er.); then Murray (1864) and Sharp (1891) placed the genus in Carpophilidae; and finally Parsons (1943) returned the genus to the Nitidulinae. It appears to me that there can no longer be any doubt as to the true position of this genus because the new character discussed in this paper appears only in the two genera *Carpophilus* and *Haptoncus*. Moreover, as Murray (1864) and Sharp (1891) have each separately commented, the genus actually keys out to the Carpophilinae in fresh material and the terminal abdominal segments only become retracted in dried specimens. Sharp (1891) writes, "no species of *Epuraea* has the elytra so short as *Haptoncus*" and adds, "that no good line of demarcation between the two groups, as at present defined, exists." I submit that the presence of the antennal sensillum in *Haptoncus* and its absence in *Epuraea* and the other Nitidulinae, indicates that the former genus is allied to *Carpophilus* and the other Carpophilinae.

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